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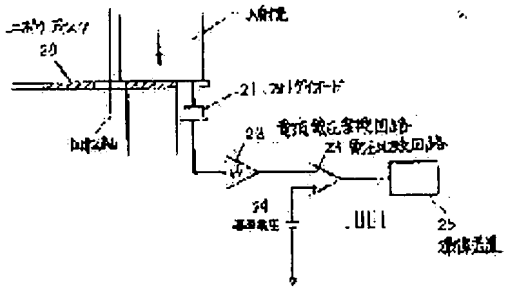
(54) **NIPKOW DISK TYPE OPTICAL SCANNER DEVICE**

(57)Abstract:

PROBLEM TO BE SOLVED: To eliminate a scan irregularity and obtain an image pickup screen having no light and shade stripe by synchronizing the scan period of the scanner device with the image pickup period of an image pickup device.

SOLUTION: The top surface of a Nipkow disk 20 is irradiated with incident light 1. A multipoint scan on a sample is made with the incident light 1 transmitted through a scan track by rotating this Nipkow disk 20. Incident light 1 passed through a pinhole for scan start point detection, on the other hand, is photodetected by a photodiode 21 each time the pinhole for scan start point detection passes over a photodiode. At this time, the output current from the photodiode 21 varies in a pulse shape, so this current variation is converted by a current-voltage converting circuit 22 into a voltage, which is inputted to a voltage comparing circuit 23. Consequently, a voltage pulse train having the same period as the scan period can be led out as an output. This pulse train is supplied as a trigger signal to the external image pickup device 25 to synchronize the optical scanner device and image pickup device 25 with each other.



LEGAL STATUS

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* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1] The image of a sample is used for the confocal point microscope constituted possible [an observation] by image pck-up equipment. While it is the Nipkow-disk type light scanner equipment containing the optical scanner fraction equipped with the Nipkow disk and the pinhole for a scanning starting point detection corresponding to the starting point of a scanning truck is arranged on the above-mentioned Nipkow disk Nipkow-disk type light scanner equipment characterized by providing a means to carry out the photo electric translation of the transmitted light of the above-mentioned pinhole for a scanning starting point detection, and to generate the trigger signal for the above-mentioned image pck-up equipment, and enabling it to take a synchronization of a scanning interval and the image pck-up period of image pck-up equipment.
[Claim 2] Nipkow-disk type light scanner equipment according to claim 1 characterized by preparing the micro-lens array disk constituted so that it might be arranged at the incident-light side of the above-mentioned Nipkow disk, it might have the micro-lens array of the pinhole pattern of a Nipkow disk, and the same pattern and a condensing light of each micro lens of a micro-lens array might carry out incidence to the pinhole to which a Nipkow disk corresponds in the above-mentioned optical scanner fraction.

[Translation done.]

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4	BRS	L5	107497	photograph$3	USPAT	2000/05/29 14:55		
5	BRS	L6	105071	photograp$3	USPAT	2000/05/29 14:55		
6	BRS	L7	145	3 and 4	USPAT	2000/05/29 14:56		
7	BRS	L3	485	1 adj 2	USPAT	2000/05/29 14:57		